

**Additional File 2.** Synonymous codon class assignments in *Drosophila spp.*

AA	Codon	status*	$J^2$	AA	Codon	status*	$J^2$
Phe	UUU	u	7189.2	Ala	GCU	u	573.4
	UUC	p	7189.2		GCC	p	11724.1
Leu	UUA	u	2833.4	Tyr	GCA	u	4006.1
	UUG	u	1283.9		GCG	u	442.6
	CUU	u	2095.3	UAU	u	3234.9	
	CUC	p	286.5	UAC	p	3234.9	
	CUA	u	1868.1	His	CAU	u	1313.6
	CUG	p	25963.3	CAC	p	1313.6	
Ile	AUU	u	1146.5	Gln	CAA	u	5385.2
	AUC	p	10418.4	CAG	p	5385.2	
Met	AUA	u	4652.7	Asn	AAU	u	4600.4
	AUG	n/a	n/a	AAC	p	4600.4	
Val	GUU	u	2102.8	Lys	AAA	u	12019.1
	GUC	p	852.8	AAG	p	12019.1	
	GUA	u	2391.4	Asp	GAU	u	1274.0
	GUG	p	4297.4	GAC	p	1274.0	
Ser	UCU	u	744.6	Glu	GAA	u	8697.3
	UCC	p	3197.8	GAG	p	8697.3	
	UCA	u	1708.8	Cys	UGU	u	1758.7
	UCG	p	1005.4	UGC	p	1758.7	
	AGU	u	1147.9	Trp	UGG	n/a	n/a
Pro	AGC	p	203.0	Arg	CGU	p**	129.6
	CCU	u	793.3	CGC	p	6067.9	
	CCC	p	3573.1	CGA	u	3359.9	
	CCA	u	1068.2	CGG	u	980.7	
	CCG	e***	1.2	AGA	u	571.7	
Thr	ACU	u	1013.6	Gly	AGG	p	571.7
	ACC	p	6217.3		GGU	u	25.2
	ACA	u	1492.6		GGC	p	5098.3
	ACG	u***	70.2		GGA	u	1415.0
					GGG	u	827.7

\* p = preferred codon; u = unpreferred codon; e = equal codon

\*\* codon assigned equal status in *D. simulans* and *D. sechellia*

\*\*\* codon assigned preferred status in *D. simulans* and *D. sechellia*